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February 9, 2006

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DRAFT ANNUAL GROUNDWATER TREATMENT SYSTEMS (GWTS) OPERATION DATA SUMMARY REPORT, JANUARY THROUGH DECEMBER 2004, OPERABLE UNIT (OU) 2, FORMER FORT ORD, CALIFORNIA

Dear Ms. Youngblood:

The Department of Toxic Substances Control has reviewed the *"Draft Annual Groundwater Treatment Systems Operation Data Summary Report, January through December 2004, Operable Unit 2, Former Fort Ord, California"* dated June 24, 2005. The document was prepared by Ahtna Government Services Corporation for the Department of the Army Corps of Engineers, Sacramento District.

Comments shall be responded to or resolved in the *Draft Final Annual Evaluation Report –January through December 2004 Operable Unit 2* and subsequent annual groundwater remedy evaluation reports.

Specific Comments:

1. Executive Summary: 8th paragraph, (page viii), Section 3.2.2, 2nd paragraph (Page 10), and Section 4.1, 2nd paragraph (Page 11). Based on a review of the trend graph analysis results in Table A-4 (Appendix A) and Table 8, the statistically significant positive trends (positive trends) were summarized incorrectly in the text. The only statistically significant positive trends were calculated for the following wells and chemicals of concern (COCs):

EW-OU2-01-A	TCE
EW-OU2-10-A	Benzene

EW-OU2-16-A 1, 1-DCA, 1, 2-DCP, PCE, TCE and VC

The text should be updated to reflect the trend analysis results accurately. Concentration trend graphs with respect to time should be provided for any positive trends identified by the Mann Kendall test. The discussions regarding trends should be revised to reflect both forms of data analysis.

A review of the concentration data for these extraction wells show that there are not increasing trends at wells EW-OU2-01-A or EW-OU2-10-A, therefore, even though the Mann Kendall test showed positive trends they may not be relevant to the remediation effectiveness. However, there are increasing trends for all COCs at EW-OU2-16-A. These increasing trends may be due to increased concentrations of COCs in the landfill gas as reported by Shaw Environmental, Inc. (*Draft Landfill Gas Perimeter Probe Monitoring Report, 2004; September 2005*). These trends as well as increasing trends in the nearby monitoring wells (i.e., MW-BW-OU2-02-A and MW-BW-OU2-73-A) should be plotted, evaluated and explained in the draft final report. Recommendations should be provided for future remedy enhancements to reduce these concentrations, if applicable.

2. Executive Summary, 9th paragraph, Page viii. The 2004 capture zone was compared to the 2002 capture zone. This statement should be updated to reflect comparison of the 2004 capture zone with the previous 2003 capture zone.

3. Executive Summary, last paragraph, Page viii and Section 4.2, Page 12. The executive summary and recommendations state that the effectiveness of the GWTS in the upper 180-foot aquifer in capturing the leading edge of the COC plume should be evaluated. The Army is adding new wells to the down gradient portion of the Operable Unit (OU) 2 groundwater extraction system to capture the leading edge of the plume. The status of that GWTS expansion should be summarized and referenced in this report.

4. Section 2.3.2, Third paragraph, Page 4. The cumulative mass removed that is stated in the text should match the mass removed numbers reported in Table A-3, Appendix A (i.e., 444 pounds, not 408 pounds). Please update the text to match Table A-3.

5. Section 3.3, second paragraph, Page 10. The text in this paragraph should be updated to reflect 2004 capture zone conclusions, not 2003.

6. Section 4.1, first paragraph, Page 11. This section of the report (as well as other sections) should be updated to reflect 2004 data, rather than 2003 data (i.e., 36.5 pounds of VOCs were removed in 2004; not 56.6 pounds).

7. TCE Isoconcentrations (Plates 9 through 20). The OU 2 treatment system has been successfully operating for over five years and the plume appears to be stable. Quarterly isoconcentration maps that are generated in the quarterly monitoring reports should be reviewed and referenced, but all four quarters do not need to be duplicated for this report (annual is sufficient).

8. Groundwater Elevation Contour Maps (Plates 21 through 26). The OU 2 treatment system has been successfully operating for over five years and the plume appears to be stable. Quarterly groundwater contour maps that are generated in the quarterly monitoring reports should be reviewed and referenced, but four quarters of contour maps do not need to be duplicated for this report (annual is sufficient). One-foot groundwater elevation contour lines would be helpful for evaluating extraction system capture, especially in the extraction well areas. The extraction well groundwater elevations do not represent aquifer conditions and may be artificially lower in the well than the aquifer because of well loss. The well loss should be evaluated and water elevation data adjusted before the data is posted or the water elevation measurements from the extraction wells should not be used in contouring. The eight-foot mean sea level (MSL) contour line is missing near well MW-OU2-69-180; which was measured at the elevation of 7.44 feet MSL (lower 180 and 400 foot Aquifer; March 2004).

9. Appendix B: Section 3.3, Page 4, Section 4.0, Page 8. A stagnation zone has been identified between Wells MW-OU2-02-A and MW-OU2-73-A. The Army should address this stagnation zone and how cleanup is affected by not adding another extraction well in this area. This topic should also be discussed in the main text of the evaluation report (Section 3.3 and. 4.1).

If you have any questions, please contact me at (916)255-6403.

Sincerely,

Susan Goss

Susan Goss, P.G., C.H.G.
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